Application No.: 10/812,416

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1. (Cancelled)

2. (Previously presented) The semiconductor device according to claim 51, wherein the

substrate is silicon carbide.

3. (Previously presented) The semiconductor device according to claim 51, wherein said

III-V Nitride semiconductor epitaxial film is formed in contact with a substrate having (11-20)

face.

4. (Cancelled)

5. (Previously presented) The semiconductor device according to claim 51, wherein a

number of group III atoms are equal to a number of nitrogen atoms on a surface of said III-V

Nitride semiconductor epitaxial film.

6-50. (Cancelled)

51. (Currently amended) A semiconductor device comprising

a first III-V Nitride semiconductor epitaxial film having a main plane of (11-20) and

having 4H-polytype structure selectively formed in contact with a substrate having 4H-type

structure, wherein said first III-V Nitride semiconductor epitaxial film is a 4H-AlN film,

a seed layer of III-V Nitride having 4H-polytype structure selectively formed on said first

III-V Nitride semiconductor epitaxial film, wherein said seed layer contains Ga, the seed layer

having a shape of a stripe along the <1-100> direction, and

2

Application No.: 10/812,416

a second III-V Nitride semiconductor epitaxial film having 4H-polytype structure formed on said first III-V Nitride semiconductor epitaxial film, wherein said second III-V Nitride semiconductor epitaxial film contains Ga and is in contact with said seed layer.

52. (Currently amended) An optoelectronic device comprising,

a first III-V Nitride semiconductor epitaxial film <u>having a main plane of (11-20) and</u> having 4H-polytype structure selectively formed in contact with a substrate having 4-H type structure;

a seed layer of III-V Nitride having 4H-polytype structure selectively formed on said first III-V Nitride semiconductor epitaxial film,

a second III-V Nitride semiconductor epitaxial film having 4H-polytype structure formed on said first III-V Nitride semiconductor epitaxial film; and

a waveguide formed on said second III-V Nitride semiconductor epitaxial film,

wherein said first III-V Nitride semiconductor film is a 4H-AIN film,

said seed layer contains Ga and has a shape of a stripe along the <1-100> direction,

said second III-V Nitride semiconductor epitaxial film contains Ga and is in contact with said seed layer, and

said second III-V Nitride semiconductor epitaxial film includes an n-type layer, a p-type layer and an active layer, said active layer being formed between said n-type layer and said p-type layer.

53. (Previously presented) The optoelectronic device according to claim 52, wherein a plurality of layers are disposed between said waveguide and said substrate.

## Application No.: 10/812,416

- 54. (Previously presented) The optoelectronic device according to claim 52, wherein said substrate having 4-H type structure is SiC.
- 55. (Previously presented) The optoelectronic device according to claim 52, wherein said first III-V Nitride semiconductor epitaxial film is formed on a substrate having (11-20) face.
- 56. (Previously presented) The optoelectronic device according to claim 52, wherein a number of group III atoms are equal to a number of nitrogen atoms on a surface of said second III-V Nitride semiconductor epitaxial film.
- 57. (Previously presented) The optoelectronic device according to claim 52, wherein said waveguide is formed as a straight line perpendicular to either (0001) face or (1-100) face.
- 58. (Previously presented) The semiconductor device according to claim 51, wherein said second III-V Nitride semiconductor epitaxial film is formed by epitaxial lateral overgrowth.
- 59. (Previously presented) The semiconductor device according to claim 52, wherein said second III-V Nitride semiconductor epitaxial film is formed by epitaxial lateral overgrowth.